NUTRITION TODAY

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330th Medical Briga

Early to bed and
early to rise

Makes a body
healthy
wealthy
and wise

Staying Healthy

Eating Right

There all sorts of tools on the internet today to help you

Understand the principles of good nutrition

Answer general nutrition questions

Answer specific nutrition questions

Provide materials

Nutrition

the process by which an individual takes in and utilizes food material

Nutrition

is the study of the relationship between food and drink in their relationship to health or disease, especially in determining an optimal diet for purposes of health, weight loss, bodybuilding, or other purposes.

Eat a nutritious diet

reduce the risk for death or disability
due to chronic diseases such as

- heart disease
- certain cancers
- diabetes
- stroke
- osteoporosis

A gap remains between recommended dietary pattern
what Americans actually eat

Be Physically Active Every Day

Feel Fit for Life

2000 steps a day every day

Nutrients:

substances necessary for sustaining life

Vitamins and minerals

Natural substances contained in a wide variety of foods that have
recognized as essential to maintaining healthy body systems. Scie
defined specific daily amounts of vitamins and minerals that are n
for good health.

Carbohydrates, proteins, and fats

Compounds found in foods that the body uses to generate energy c

Phytochemicals:

Natural plant compounds that may provide a variety of health ben
the bright colors in fruits and vegetables come from phytochemica

Use the resources available to you

Print

Web

Video

The USDA is responsible government agency to educ
The public about food.

USDA provides nutrition education services and proc
- Standards
- Materials
- Nutrition education information and materials

USDA education initiatives include

- Food Guide Pyramid
- ABC

One of the products you can use is a program called

AIM

BUILD

CHOOSE

Basic nutrition education for literate adults

USDA has materials available for purchase

Nutrition and Your Health:

DIETARY GUIDELINES FOR AMERICANS

Aim for Fitness

BUILD a Healthy Base

CHOOSE Sensibly

...for good health

DIETARY GUIDELINES FOR AMERICANS

AIM FOR FITNESS...

- ▲ Aim for a healthy weight.
- ▲ Be physically active each day.

BUILD A HEALTHY BASE...

- ■ Let the Pyramid guide your food choices.
- ■ Choose a variety of grains daily, especially whole grains.
- ■ Choose a variety of fruits and vegetables daily.
- ■ Keep food safe to eat.

CHOOSE SENSIBLY...

- ● Choose a diet that is low in saturated fat and cholesterol and moderate in total fat.
- ● Choose beverages and foods to moderate your intake of sugars.
- ● Choose and prepare foods with less salt.
- ● If you drink alcoholic beverages, do so in moderation.

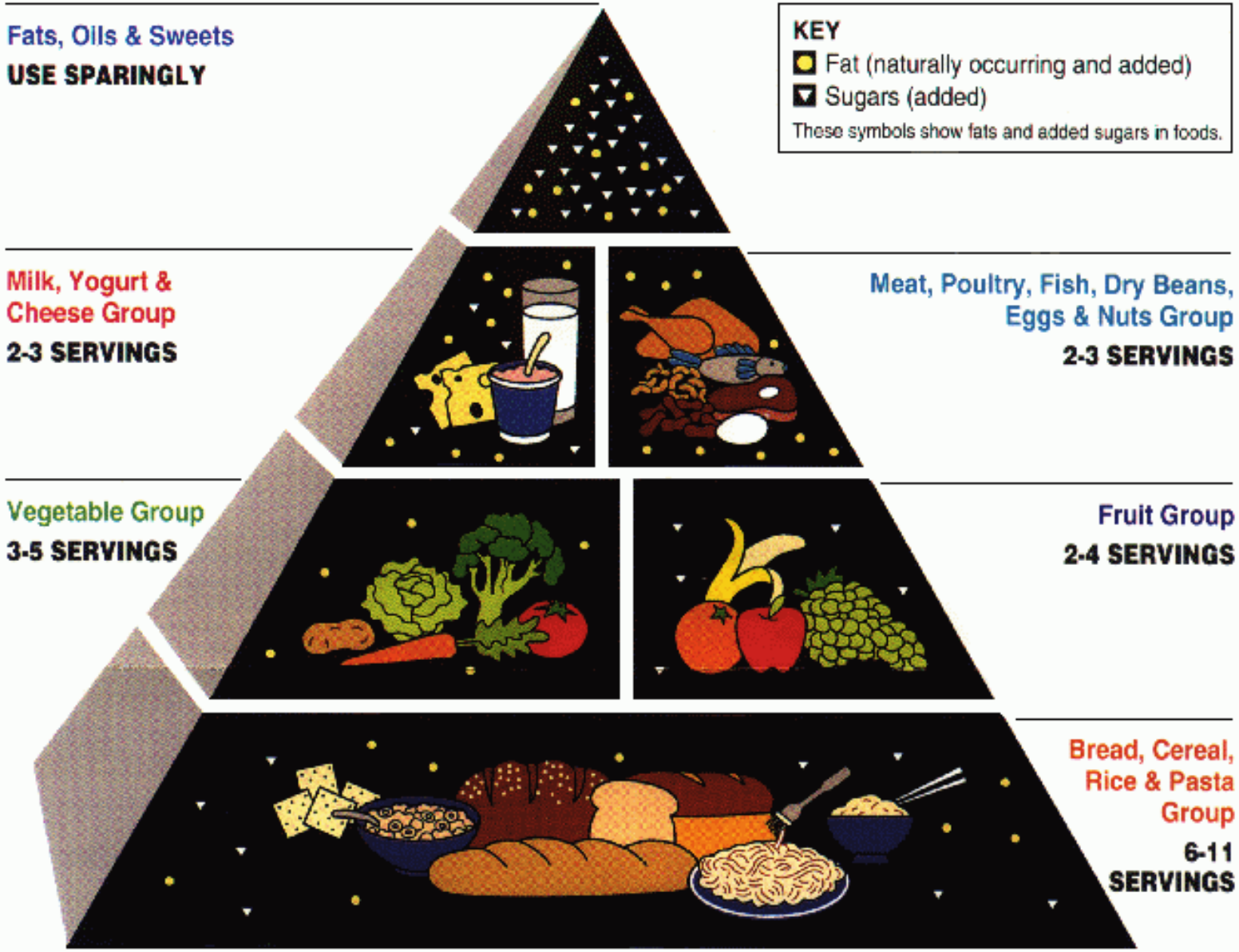
...for good health

Food Guide Pyramid is an outline of what to eat each day, and it calls for a variety of food and nutrients.

Visually stimulating

Easily understood by many age groups, Readers and non-readers

USDA newest challenge is to develop a tool
To use to fight obesity


Fats, Oils & Sweets
USE SPARINGLY
KEY
Fat (naturally occurring and added)
Sugars (added)
These symbols show fats and added sugars in foods.
Milk, Yogurt & Cheese Group
2-3 SERVINGS
Meat, Poultry, Fish, Dry Beans, Eggs & Nuts Group
2-3 SERVINGS
Vegetable Group
3-5 SERVINGS
Fruit Group
2-4 SERVINGS
Bread, Cereal, Rice & Pasta Group
6-11 SERVINGS

Food Pyramid promotes
low fat diets
rich in:
fiber
grain products
fruits and vegetables

Current "Buzzwords" in Nutrition

Chemoprevention

Designer Food

Functional Food

Nutraceutical

Pharmafood

Phytochemical

Chemoprevention -- Using one or several chemical compounds to prevent,stop, or reverse the development of cancer

Designer Food -- Processed foods that are supplemented with food ingredients naturally disease-preventing substances

Functional Food -- Any modified food or food ingredient that may provide a health benefit b the traditional nutrients it contains

Nutraceutical -- Specific chemical compounds in food, including vitamins and additives, that may aid in preventing disease

Pharmafood -- Food or nutrient that claims m
or health benefits, including the prevention a
treatment of disease

Phytochemical – Non-nutrient plant chemica
contain protective, disease-preventing compo

Antioxidants: Plant substances that protect the b
by neutralizing free radicals, or unstable oxygen m

Free radicals and unstable oxygen molecules dama
cause cellular damage by taking electrons from mo
in healthy cells

This damage is thought to be a fundamental cause
many degenerative diseases and the aging process

Food and Phytochemicals

- Cruciferous Vegetables
- Allium vegetables
- Cruciferous vegetables
- Solanaceous vegetables
- Umbelliferous vegetables
- Compositae plants (artichoke)
- Citrus fruits
- Glucarates

Food and Phytochemicals

Food	Phytochemical(s)
Allium vegetables (garlic, onions, chives, leeks)	Allyl sulfides
Cruciferous vegetables (broccoli, cauliflower, cabbage, Brussels sprouts, kale, turnips, bok choy, kohlrabi)	Indoles/glucosinolates Sulfaforaphane Isothiocyanates/thiocyanates Thiols
Solanaceous vegetables (tomatoes, peppers)	Lycopene
Umbelliferous vegetables (carrots, celery, cilantro, parsley, parsnips)	Carotenoids Phthalides Polyacetylenes
Compositae plants (artichoke)	Silymarin
Citrus fruits (oranges, lemons, grapefruit)	Monoterpenes (limonene) Carotenoids Glucarates

Food and Phytochemicals, Contd

FOOD	Phytochemicals
Other fruits (grapes, berries, cherries, apples, cantaloupe, watermelon, pomegranate)	Ellagic acid Phenols Flavonoids (quercetin)
Beans, grains, seeds (soybeans, oats, barley, brown rice, whole wheat, flax seed)	Flavonoids (isoflavones) Phytic acid Saponins
Herbs, spices (ginger, mint, rosemary, thyme, oregano, sage, basil, tumeric, caraway, fennel)	Gingerols Flavonoids Monoterpenes (limonene)
Licorice root	Glycyrrhizin Catechins

Phytochemicals are being individually evaluated for th
and effectiveness in disease prevention

Increasing consumption of fruits and vegetables increa
phytochemicals

A major prevention strategy has been the “5 A Day for
Health” program sponsored by the Produce for Better
Foundation

5 A Day for Better Health and Eat your Colors Every D
show the way to better health

EAT YOUR COLORS EVERY DAY

RED

GREEN

YELLOW

ORANGE

BLUE

WHITE

The more reds, oranges, greens, yellows, a
you see on the plate, the more health pron
properties you are getting from your veget
and fruit choices.

Nutrition research shows that colorful vegetable
contain essential vitamins, minerals, fiber, and
phytochemicals that your body needs to promote
and help you feel great.

Eat with your eyes

Color taste and texture

Plan your menus to eat colo

When you add deep reds or bright pinks to your daily d
you are also adding a powerful antioxidant called lycop

Lycopene is found in tomatoes, red and pink grapefruit
watermelon, papaya and guava.

Diets rich in lycopene are being studied for their abilit
fight heart disease and some cancers.

Specific phytochemicals in the red group that are being studied for their health-promoting properties include lycopene and anthocyanins.
Include a variety of RED fruits and vegetables in your diet to help maintain:

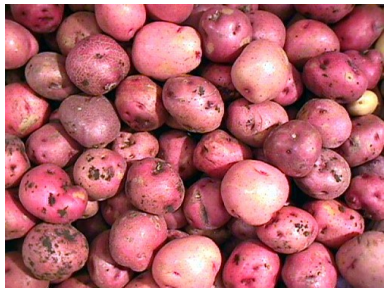
* A healthy heart
* Memory function
* A lower risk of some cancers
* Urinary tract health

Include RED fruits and vegetables in your diet such as:

Beets
Blood oranges
Cherries
Cranberries
Pink/Red grapefruit
Radicchio
Pomegranates
Radishes

Include RED fruits and vegetables in your diet such as:

Raspberries
Red apples
Red potatoes
Red cabbage
Red peppers
Red pears
Red grapes
Red onions
Rhubarb
Strawberries
Tomatoes
Watermelon



Not only do green vegetables look great and taste wond
but they are rich in the phytochemicals that keep you h

For example, the carotenoids lutein and zeaxanthin tha
found in

- spinach
- collards
- kale
- broccoli

have antioxidant properties
and are being studied for their ability to protect your e
by keeping your retina strong.

Also, research is being done on cruciferous vegetables

- cabbage,
- Brussels sprouts
- cauliflower
- kale
- turnips

to see if they may reduce the risk of cancerous tumors.

Greens are also loaded with

- essential vitamins (folate)
- minerals
- fiber

Green is the color of chlorophyl, the solar energy trap
plant leaves that makes all life on Earth possible.

For that reason leafy green vegetables deserve a spe
our diet.

Leaves are the biochemical guts of a plant where
all the essential amino acids, fatty acids, vitamins, ar
carbohydrates are manufactured in the first place.

Calorie for calorie, leafy greens are great sources fo
calcium and protein.

Green vegetables contain varying amounts of phytochemicals such as lutein and indoles, which interest researchers because of their potential antioxidant, health-promoting benef

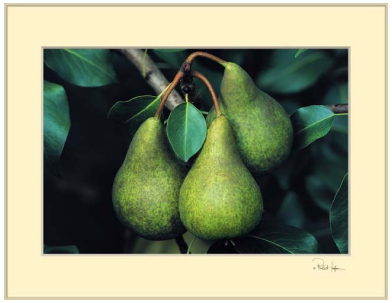
Include GREEN in your diet to maintain:

* A lower risk of some cancers*
* Vision health
* Strong bones and teeth

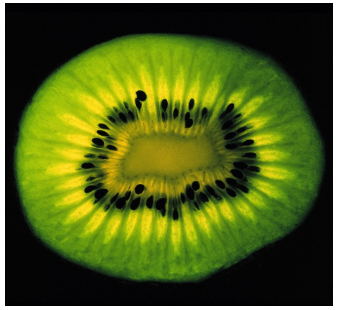
Go green every day with fruits and vegetables like these:

Artichokes
Asparagus
Arugula
Avocados
Broccoli rabe
Broccoli
Brussels sprouts
Celery
Chayote squash
Chinese cabbage Bok Choy)
Cucumbers
Endive

Green onion
Green beans
Green pears
Green cabbage
Green pepper
Green apples
Green grapes
Honeydew melon



Kiwifruit
Leafy greens
Lettuce
Leeks
Limes
Okra
Peas
Spinach
Zucchini



Orange, the color of a blazing sun, is a **must have** in your daily diet.

Orange vegetables and fruits like sweet potatoe mangos, carrots, and apricots, contain beta-car

This **carotenoid** is a natural antioxidant that is being for its role in enhancing the immune system.

Carotenoids are being touted as a powerful health-prot

The orange group is rich in Vitamin C and Vitar

Folate, most often found in leafy greens, is
also found in orange fruits and vegetables,

and is a B vitamin that may
help prevent some birth defects
and reduce your risk of heart disease

Yellow and **orange** fruits and vegetables con
varying amounts of antioxidants such as Vitar
as well as carotenoids and bioflavonoids,
two classes of phytochemicals that scientists
studying for their health-promoting potential.

Including **YELLOW**/**ORANGE** in your diet he
maintain:

* A healthy heart
* Vision health
* A healthy immune system
* A lower risk of some cancers*

Bright yellows have many of the same perks as the orange groups:

- high in essential vitamins
- high in carotenoids

Pineapple, for example, is rich with Vitamin C, mangan
the natural enzyme, bromelain

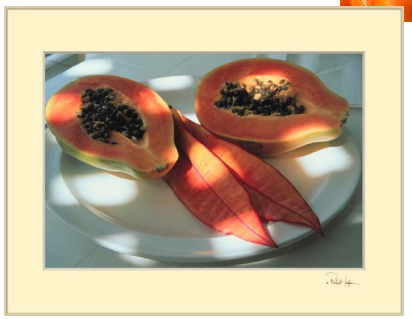
Bromelain is great to add to a meal to aid in digestion a
bloating.

Additionally, corn and pears are high in fiber. Yellow fru
vegetables belong to many different families, but they a
the common bond of being health enhancing with great

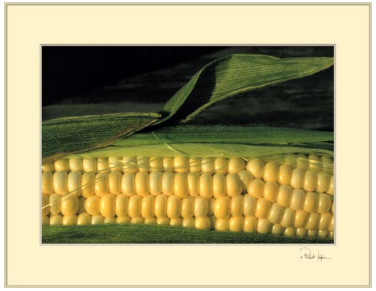
Yellows

Choose Yellow/Orange fruits and vegetables like:

Apricots
Butternut squash
Cantaloupe
Carrots
Golden kiwifruit
Grapefruit
Lemon
Mangoes
Nectarines
Oranges
Papayas
Peaches



Persimmons
Pineapples
Pumpkin
Rutabagas
Sweet corn
Sweet potatoes
Tangerines
Yellow beets



Yellow apples
Yellow watermelon
Yellow pears
Yellow figs
Yellow summer squash
Yellow peppers
Yellow potatoes
Yellow tomatoes
Yellow winter squash

Blues and purples add beautiful shades of tranquility a
richness to your plate

Blues and purples add health-enhancing flavonoids,
phytochemicals, and antioxidants.

Anthocyanin, is a phytochemical

Anthocyanins are
pigments responsible for the blue and purple color in
vegetables and fruits
being studied for their role in the body's defense of ha
carcinogens

Blueberries, in particular, are rich in Vitamin C and fo
high in fiber and potassium.

Blue/**purple** fruits and vegetables contain vary
amounts of health-promoting phytochemicals
such as anthocyanins and phenolics, currently
studied for their antioxidant and anti-aging ben

Include **BLUE**/**PURPLE** in your diet to help m
* A lower risk of some cancers *
* Urinary tract health
* Memory function
* Healthy aging

Diets rich in fruits and vegetables and low in
saturated fat and cholesterol may reduce the r
of some types of cancer, a disease associated v
many factors

Get blue/purple every day with foods such as:

Black currants
Black salsify
Blackberries
Blueberries
Dried plums
Eggplant
Elderberries
Plums
Raisins

PURPLES

Purple asparagus
Purple carrots
Purple figs
Purple Belgian endive
Purple grapes
Purple peppers
Purple potatoes

White vegetables from the onion family includ

- garlic
- chives
- scallions
- leeks
- any variety of onion

Onion family foods contain the phytochemical allicin.

Research is being conducted on allicin to learn how it may help:

lower cholesterol; blood pressure ; and

increase the body's ability to fight infections

White vegetables are having research conducted

indoles and sulfaforaphanes,

phytochemicals in cruciferous vegetables like

cauliflower for how they may inhibit cancer

Polyphenols, another important phytochemical in

and green grapes, for how they may reduce the

risk of certain cancers

White, tan, and brown fruits and vegetables contain varying amounts of phytochemicals of interest to scientists.

These include allicin, found in the garlic and onion family.
The mineral selenium, found in mushrooms, is also the subject of research.

Including WHITE in your diet helps maintain:
* Heart health
* Cholesterol levels that are already healthy
* A lower risk of some cancers*

Get all the health benefits of white by including foods such as:

Bananas
Brown pears
Cauliflower
Dates
Garlic
Ginger
Jicama
Mushrooms

Onions
Parsnips
Shallots
Turnips
White potatoes
White peaches
White nectarines

http://www.cdc.gov/nccdphp/dnpa/5ADay/campaign/colo

http://www.5aday.com/

http://www.orgsites.com/hi/hawaii5aday/_pgg2.php3

http://www.nal.usda.gov/fnic/pubs_and_db.html

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http://ohioline.osu.edu/lines/food.html;
http://ohioline.osu.edu/hyg-fact/5000/5050.html;
http://ohioline.osu.edu/hyg-fact/5000/5051.html

EAT YOUR COLORS EVERY DAY

Be Healthy, Wealthy, and Wise